

REMARKS

Claims 1-3, 5-18, and 20-24 are pending in the application. Of these, claims 1, 10, 14, and 17 are independent. Claims 1, 5, 10, 14, and 17 are amended. Claims 4 and 19 are cancelled without prejudice to or disclaimer of the subject matter therein.

Abstract

The Office Action dated December 14, 2004 objected to the abstract of the disclosure as not being in conformance with MPEP § 608.01(b). This Reply to Office Action amends the Abstract as suggested by the Examiner. Therefore, Applicants respectfully request that the Examiner withdraw the objection.

Objection to the Claims

The Office Action objected to claim 5 for reciting “has has.” In this Reply to Office Action, Applicants have corrected claim 5 to remove one recitation of “has.” Therefore, Applicants respectfully request that the Examiner withdraw the objection.

Rejection Under 35 U.S.C. § 103

The Office Action indicated that claims 1-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,350,031 to Sugiyama et al. (“Sugiyama”) in view of U.S. Patent No. 6,306,056 to Moore.

Claim 1 is amended to include the features of claim 4 without the recitation of “preferred,” and claim 4 is cancelled from the application. Amended claim 1 is directed toward an electric drive system including a combination of elements including, *inter alia*, “a first engine having operational characteristics within a first range of rotations per minute” and “a second engine having operational characteristics within a second range of rotations per minute, and wherein the first range of rotations per minute is greater

than the second range of rotations per minute.” Claim 10 is a method claim amended to recite similar features. Claim 14 is a method claim amended to recite first and second engines that are tuned to have characteristics at respective first and second ranges, “wherein the first range is different than the second range.” Claim 17 is amended to include the features of claim 19, without the recitation of “preferred,” and claim 19 is cancelled from the application.

The combination of Sugiyama and Moore does not render claim 1 unpatentable because the combination does not establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and must not be based on Applicants’ disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). See MPEP § 2143.

The combination of Sugiyama and Moore does not establish a *prima facie* case of obviousness with respect to claim 1 because Sugiyama and Moore fail to teach or suggest all the features recited in claim 1. For example, claim 1 recites an electric drive system, including all its recited features, with two engines that each have operational characteristics within a range of rotations per minute, “wherein the first range of rotations per minute is greater than the second range of rotations per minute.”

As understood from the specification of the present application, operational characteristics may be characteristics or traits of an engine. See Specification,

paragraphs 19-22. These characteristics may be controlled, through tuning, to optimize the engine performance at a certain speed or torque. See *id.* One example of these operational characteristics is a range of engine speeds or torque having the lowest specific fuel consumption. See Specification, paragraph 19. The specific fuel consumption, as an operational characteristic of an engine, is shown by the graph in Fig. 2 of the Specification. Accordingly, as understood from the Specification, the operational characteristics are characteristics of the engine, and not simply operating conditions, such as high or low speeds.

Neither Sugiyama nor Moore, alone or in combination, discloses an electric drive including all the features of claim 1, with “a first engine having operational characteristics within a first range of rotations per minute” and “a second engine having operational characteristics within a second range of rotations per minute, and wherein the first range of rotations per minute is greater than the second range of rotations per minute.” Instead, Sugiyama discloses a plural generator apparatus that includes two generators and a single engine. See Sugiyama, column 3, lines 12-27. With only a single engine, Sugiyama does not disclose two engines with different operating characteristics. Moore discloses a dual engine hybrid electric vehicle having two engines. One engine may provide power to the vehicle until additional power is required, and then the second engine may be used to provide the additional power. See Moore, column 3, line 57-column 4, line 5. Nevertheless, there is no teaching or suggestion in Moore that the engines may have different operational characteristics. Moore suggests that the two engines are similar by stating that each engine may be 115 hp engines (see Moore, column 4, lines 10-11), however, Moore does not teach or

suggest that one of the engines includes operational characteristics that differ from the other engine. And two engines with the same operational characteristics cannot render obvious a claim that recites an electric drive including all the features of claim 1, with “a first engine having operational characteristics within a first range of rotations per minute” and “a second engine having operational characteristics within a second range of rotations per minute, and wherein the first range of rotations per minute is greater than the second range of rotations per minute.” Therefore, claim 1 should be allowable over the combination of Sugiyama and Moore because Sugiyama and Moore do not teach or suggest all the limitations of claim 1. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claim 1.

The methods of claims 10 and 14 and the vehicle of claim 17 should be patentable over the combination of Sugiyama and Moore for at least the reasons discussed above with respect to claim 1. Therefore, Applicants respectfully request that the Examiner reconsider and allow claim 10.

Claims 2, 3, 5-9, 11-13, 15, 16, 18, and 20-24 depend from and add additional features to independent claims 1, 10, 14 and 17. Accordingly, these dependent claims should be allowable for at least the reasons that the independent claims are allowable. Applicants respectfully request that the Examiner withdraw the rejection and allow these claims.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1-3, 5-18, and 20-24 are in condition for allowance. Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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